

Chettinad Cement Corporation Private Limited

Cement Plant & Captive Power Plant

Rani Meyyammai Nagar, Karikkali Village, Dindigul District, Tamilnadu

Environmental Clearance (EC) Compliance Report (Oct '17 - Mar '18)

EC granted by MoEF vide Letter No.F.No.J-11011/110/2011-1A-11 (i) dated 29th Nov, 2012
(for Expansion of Cement Plant Capacity from 4.5 to 7.0 million tons per annum & Captive Power Plant Capacity from 48 to 78 MW)

PRESENT STATUS OF PROJECT

a. Cement Plant:

Existing Capacity : 4.5 million tons per annum
Additional Proposed Capacity : 2.5 million tons per annum – Not yet established

Total Capacity (After Expansion) : 7.0 million tons per annum

b. Power Plant:

Existing Capacity : 48 mw
Additional Proposed Capacity : 30 mw – Project Completed & Commissioned in July'14

Total Capacity : 78 mw

A. Specific Conditions

S.No	Specific Condition	Compliance Status
i.	The company shall comply with the condition stipulated in the environmental clearance and NOC granted by SPCB for the existing plant.	The conditions stipulated in the Environmental Clearance and Tamilnadu Pollution Control Board (TNPCCB) Consent Orders for the existing plant are being complied with.
ii.	Continuous monitoring system to monitor gaseous emissions to the all stacks shall be provided. After expansion, limit of PM shall be controlled within 50mg/Nm3 by installing adequate air pollution control system, Electrostatic Precipitators to Clinker Cooler, Bag House to Raw Mill/Kiln and Bag Filters to Coal Mill and Cement Mill, Low NOx burners should be provided to control NO _x emissions.	<p>The continuous stack monitoring system to monitor gaseous emissions (SO₂ and NO_x) and dust (PM) has been provided and the concentrations of pollutants are being controlled by providing the following appropriate control measures to ensure compliance with prescribed norms for the existing plant.</p> <p>Required APC measures to control emissions within prescribed standards viz., Electrostatic Precipitators to Clinker Cooler, Bag House to Raw Mill/Kiln, Coal Mill and Cement Mill, and Low NO_x burners have been provided for the</p>



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		existing plant. As Sulphur is getting converted into its compounds during the process of formation of Clinker in the Kiln, the emission of SO ₂ will be under control. For the proposed Cement Plant Expansion, similar control measures will be provided.
iii.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R .No. 826 (E) dated 16 th November, 2009 should be followed.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R .No. 826 (E) dated 16 th November, 2009 are being followed for the exiting Plant and the same will be followed for the proposed Cement Plant Expansion also.
iv.	Secondary fugitive emission from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	<p>The secondary fugitive Emissions are being controlled by providing appropriate control measures as indicated below for the existing plant.</p> <ol style="list-style-type: none"> Ensuring paved/concrete roads for truck movement Use of closed trucks/bulkers/covering materials with tarpaulin before commencement of transportation Providing closed storage for Gypsum, Coal Providing closed Silos for Fly Ash, Cement Providing Water Sprinkling arrangements Providing Bag Filters at Transfer Points Maintaining the equipment in good condition Developing Green Belt along the boundary of the plant premises <p>Monitoring of fugitive emissions is being carried out at 3 locations every quarter.</p> <p>For the proposed Cement Plant Expansion, similar control measures will be ensured.</p>



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v.	Efforts should be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored.	<p>For the existing plant, all the raw materials are being transported in closed trucks/trucks or after covering materials with tarpaulin before commencement of transportation. The Fly Ash procured from nearby Thermal Power Plants is transported to our Cement Plant in bulkers only. The Fly Ash generated from our Captive Power Plant is pneumatically conveyed through pipelines to the Cement Plant.</p> <p>No overloading of trucks is permitted.</p> <p>Vehicles with Pollution Under Control Certificate only being permitted inside the premises.</p> <p>The same practices will be followed for the proposed Cement Plant Expansion also.</p>
vi.	Total water requirement for proposed expansion shall not exceed 800m ³ /day. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.	<p>Total water requirement for proposed expansion will not exceed 800m³/day.</p> <p>For the existing (30 mw +18 mw) and the additional (30 mw) Captive Power Plants, Air Cooled Condensers have been installed for condensate cooling to ensure water conservation. The industrial effluents generated from the plant , after treatment are being reused within the plant premises for cooling purpose and the plant related other activities. The domestic effluents generated, after treatment are used for greenbelt development and dust suppression. All the treated water is used within the plant premises, ensuring ZERO Discharge System.</p> <p>The same practices will be followed for the proposed Cement Plant Expansion also.</p>



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vii.	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<p>Rainwater harvesting pond with a capacity of 1200 m³ has been provided in the Plant premises.</p> <p>100% water requirement for existing plant & domestic purpose are being met from rainwater harvested from the Mine.</p> <p>No ground water is drawn for any of the requirements of the plant.</p> <p>For the proposed Cement Plant Expansion also, the rainwater harvested from the Mine will only be used.</p>
viii.	Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P)Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.	<p>The quality of treated industrial & domestic effluents and the ground water quality are monitored regularly. The monitored data are being submitted to Ministry's Regional Office at Chennai, TNPCB & CPCB, once in six months.</p> <p>The Industrial effluents generated from the plant are being treated to meet the norms prescribed by TNPCB and reused for cooling purpose and the Plant related other activities within the Plant premises. No treated Industrial Effluent is let out on the surface.</p> <p>The Industrial Effluents generated do not contain any toxic element and there is no discharge of treated Industrial Effluent and the same is reused within the plant premises. So, leachate study is not applicable.</p> <p>The treated water from the Sewage Effluent Plant is being used for greenbelt development and dust suppression.</p> <p>The same practices will be followed for the proposed Cement Plant Expansion also.</p>



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v.	Efforts should be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored.	<p>For the existing plant, all the raw materials are being transported in closed trucks/trucks or after covering materials with tarpaulin before commencement of transportation. The Fly Ash procured from nearby Thermal Power Plants is transported to our Cement Plant in bulkers only. The Fly Ash generated from our Captive Power Plant is pneumatically conveyed through pipelines to the Cement Plant.</p> <p>No overloading of trucks is permitted.</p> <p>Vehicles with Pollution Under Control Certificate only being permitted inside the premises.</p> <p>The same practices will be followed for the proposed Cement Plant Expansion also.</p>
vi.	Total water requirement for proposed expansion shall not exceed 800m ³ /day. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.	<p>Total water requirement for proposed expansion will not exceed 800m³/day.</p> <p>For the existing (30 mw +18 mw) and the additional (30 mw) Captive Power Plants, Air Cooled Condensers have been installed for condensate cooling to ensure water conservation. The industrial effluents generated from the plant , after treatment are being reused within the plant premises for cooling purpose and the plant related other activities. The domestic effluents generated, after treatment are used for greenbelt development and dust suppression. All the treated water is used within the plant premises, ensuring ZERO Discharge System.</p> <p>The same practices will be followed for the proposed Cement Plant Expansion also.</p>



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ix.	All the bag filter dust, raw meal dust coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for Cement manufacturing. Spent oil and batteries shall be sold be authorized recyclers / reprocesses only.	All the Bag Filter dust, Raw Meal dust Coal Dust, Clinker Dust and Cement Dust from pollution control devices are being recycled and reused in the respective process. The same practices will be followed for the proposed Cement Plant Expansion also.
x.	All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2009. Efforts should be made to use fly ash maximum in making Pozollana Portland Cement (PPC).	Fly Ash generated from our Captive Power Plant is being used in the Portland Pozzolana Cement (PPC) manufacturing in our Cement Plant itself. The same practice will be followed for the proposed Cement Plant Expansion also.
xi.	Effort shall be made to use low grade lime, more fly ash and solid waste in the Cement manufacturing	Around 25 % of Fly Ash is used in PPC production. All efforts will be made to use Low grade Limestone. The low grade Limestone from the Mines are blended with high grade Limestone and used in the Cement manufacturing to conserve the mineral. The blast furnace slag, a solid waste is also being used for Portland Slag Cement production. The same practices will be followed for the proposed Cement Plant Expansion also.
xii.	Measure shall be made to use of high calorific hazardous waste in the Cement Kiln and necessary provision shall be made accordingly.	For the existing Plant, latest and high efficiency multi-channel burner has been provided to handle the high calorific hazardous waste in the Cement kiln. The same facilities will be provided for the proposed Cement Plant Expansion also.
xiii.	As proposed, green belt shall be developed in least 33% area in and around the Cement Plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	Greenbelt is being developed in the Plant, area. Total Plant Area is 72.95 ha and 33% of Total Plant Area is 24.07 ha. So far, 47856 Saplings have been planted over an area of 23.29 ha. Balance area of 0.78 ha will be planted with 700 saplings by Dec 2019.



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xiv.	All the recommendation made in the Charter on Corporate Responsibility for Environment Protection (CERP) for the Cement Plants shall be implemented.	CREP guidelines pertaining to Cement Plant are being followed. The same practices will be followed for the proposed Cement Plant Expansion also.
xv.	All the commitments made to the public during / public consultation meeting held on 21 th March, 2012 shall be satisfactory implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.	The details of commitments made to the public during public hearing and the action plan to implement the same had been submitted to Ministry's Regional Office at Bangalore on 27.03.2012. The commitments are being met from the budget allocated.
xvi.	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public hearing issues and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Officer at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.	5% of the total cost of the project has been earmarked towards the Corporate Social Responsibility. The action plan has been prepared and submitted on 02.04.2013 to the Ministry's Regional Officer at Bangalore. Implementation will be ensured in a time bound manner.
xvii.	The company shall provide housing for construction labour within the site will all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc., The housing may be in the form of temporary structure to be removed after the completion of project.	The temporary infrastructure facilities provided for the Captive Power Plant Expansion have been removed. For the proposed Cement Plant expansion, all necessary infrastructure and facilities will be provided for the construction labour within the site. The temporary structures (houses) will be removed after the completion of the project.
xviii.	The company shall submit within three months their policy towards corporate Environment Responsibility which should inter-alia address (i) standard operating process / Procedure to bring into focus any infringement/deviation/violation of environment or forest norms /conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) system of reporting of non compliance / violation environmental norms to the Board of Directors of the company and / or stakeholders or Shareholders	The Corporate Environment Policy has been formulated for adherence by all the Cement units of the Group. A copy of the same has already been submitted on 02.04.2013 to MoEF Regional Office, Bangalore.



B. General Conditions

S. No	General Condition	Compliance Status
i.	The Project authorities must strictly adhere to the stipulations made by the Tamilnadu State Pollution Control Board and State Government.	Stipulations of Tamilnadu Pollution Control Board / State Government are being complied with for the existing plant and the same will be followed for the proposed Cement Plant Expansion also.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	No further expansion or modernization of the plant will be carried out without prior approval of the MoEF & CC, New Delhi & TNPCB.
iii.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	<p>The latest standards/norms prescribed by the Ministry/ Tamilnadu Pollution Control Board for gaseous emissions are being followed.</p> <p>The same practice will be continued for the proposed Cement Plant Expansion also.</p>
iv.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore and the SPCB/CPCB once in six months.	<p>8 numbers of air quality monitoring stations & Two numbers Continuous Ambient Air Quality Monitoring Station (CAAQMS) have been installed in consultation with TNPCB.</p> <p>Data on Ambient Air Quality and stack emissions being regularly submitted to MoEF & CC, Delhi, MoEF & CC Regional Office, Chennai, TNPCB and CPCB.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>



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v.	Industrial Waste Water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<p>The Industrial Waste Water viz., Cooling Tower Blow Down, DM/RO Plant Rejects etc., are being collected and treated in ETP to meet the standards prescribed. Treated water being used for cooling purpose and the plant related other activities. The domestic waste water from the plant and the colony are treated in STP and reused for greenbelt and dust suppression. The treated water meets the standards prescribed. Zero Discharge System is being followed in the existing Plant.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
vi.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	<p>In the existing Plant, for the sources of noise generation, the appropriate and required control measures viz., acoustic hoods, silencers, enclosures have been provided. The Equipment and Machinery used are being maintained well. Ambient Noise level is being monitored by a recognized laboratory at 8 locations. These ambient noise levels conform to the standards prescribed viz., 75 dBA for the day time and 70 dBA for the night time.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
vii.	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	<p>Occupational health surveillance of the workers is being done on a regular basis and records are being maintained as per the Factories Act.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The rainwater harvesting structures have been provided in the existing plant. The capacity of rainwater harvesting pond is 1200 m ³ , which also helps to recharge the ground water.



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		<p>100% water requirements for the plant & domestic purpose are being met from rainwater harvested from the Mine. No ground water is drawn for any of the requirements of the plant.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
ix.	<p>The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.</p>	<p>The environmental protection measures and safeguards recommended in EIA/EMP as indicated below will be ensured for the expansion programme.</p> <ul style="list-style-type: none"> a. ESP, Bag House/Bag Filters to control air emission b. Water Sprinkling to suppress dust c. Treatment and use of industrial and domestic effluents within the premises ensuring zero discharge from the plant d. Use of Fly Ash for Cement manufacturing e. Disposal of used oil to authorised recyclers f. Noise Control Measures like enclosures, silencers g. Greenbelt in the plant and colony <p>Socio-economic development programme covering Health, Education and Infrastructure are being implemented.</p>
x.	<p>The requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.</p>	<p>The required capital cost and the annual recurring expenditure earmarked for implementing the environment pollution control measures and the conditions stipulated by the MoEF & CC as well as the State Government, are not being diverted any other purpose. The status of implementation of the conditions is being submitted to the MoEF & CC Regional Office, Chennai, once in six months. The same practices will be continued for the proposed Cement Plant Expansion also.</p>



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xi.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Environmental Clearance copy sent on 15.12.2012 to Gujiliyampari Panchayat, Kaikkali Village Vendasandur Taluk, Dindigul District. Also, a copy of EC granted, has also been uploaded in our company website.
xii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Bangalore. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<p>The status of compliance of the stipulated environment clearance conditions, including results of monitored data are being uploaded in our website, once in six months.</p> <p>The pollutant levels (ambient air as well as stack emissions) are being monitored and displayed at main gate of the company in the public domain.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
xiii.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore/ CPCB / SPCB shall monitor the stipulated conditions.	Six monthly EC compliance report and the monitored data are being submitted (both in hard copies as well as by e-mail) to the Regional Office of MoEF & CC Chennai/CPCB/ TNPCB. The same practice will be continued for the proposed Cement Plant Expansion also.
xiv.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on	Environment statement for the year 2017-2018 in Form V submitted on 28.09.2017 to TNPCB and the Regional Office of the MoEF & CC, Chennai for the existing Plant and a copy of the same has been uploaded in the website also.



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	the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEF at Bangalore by e-mail.	<p>The status of compliance of EC conditions is being uploaded in the company's website and is also being submitted to the Regional Office of the MoEF & CC, Chennai by e-mail.</p> <p>The same practices will be continued for the proposed Cement Plant Expansion also.</p>
xv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to Regional Office at Bangalore.	<p>Advertisements in two local newspapers (Indian Express & Dinaboomai Daily, both dated 7th Dec, 2012) have been published informing the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in.</p> <p>The copies of the same have also been submitted on 15.12.2012 to MoEF Regional Office at Bangalore.</p>
xvi.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<p>As the internally accrued funds will be invested for the proposed expansion, this condition is not applicable.</p> <p>The date of commencement of land development work for Captive Power Plant communicated to MoEF, Regional Office of MoEF, Bangalore on 02.04.2013.</p> <p>The date of commencing land development work for the Cement Plant will be informed to the Ministry as and when the same is commenced.</p>



Other Conditions

S No	Other Condition	Compliance Status
12	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions, is not satisfactory.	Guidelines noted.
13	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Guidelines noted and the additional conditions stipulated will also be implemented.
14	The above conditions shall be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management Handling, Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Guidelines noted.

for Chettinad Cement Corporation Private Limited



M U Subramanayan
Joint President (Works)

